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Mobility

Making a good program better.

Week Ending October 11, 2013

Our Mission: Traveler Services; 100% accurate, anywhere, anytime

- Motorist Quote of the Week about HRTOC SSP O'Dellavan Hubbard:

"O'Dell with VDOT was a huge help. He was kind, courteous and efficient. This young man should be used as an example of how all VDOT employees should interact with the public. O'Dell deserves a raise and to be acknowledged for his can do attitude and professionalism."

Did you know…

Connected vehicle technology is the next big innovation in motorist safety. For years, the U.S. Department of Transportation has been working on what is known as "Vehicle-to-Vehicle" communication, or "V2V".

Using wireless technology, connected vehicles—including cars, trucks, buses, and trains—could one day be able to communicate important safety information to one another. Advanced forms of this technology can take control of a car to prevent an accident by exchanging vehicle-based data regarding position, speed, and location with other vehicles in the vicinity.

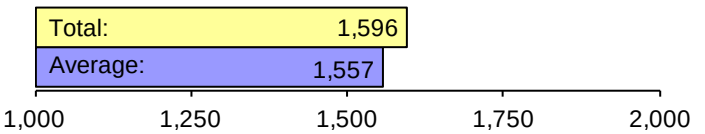
V2V communications enables a vehicle to sense threats and hazards with a 360 degree awareness of the position of other vehicles; calculate risk; issue driver advisories or warnings; or take pre-emptive actions to avoid and mitigate crashes, such as applying the brakes.

V2V systems can assist drivers in preventing 76 percent of the crashes on the roadway, thereby reducing fatalities and injuries that occur each year.

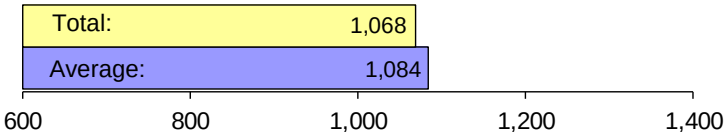
Source: http://www.its.dot.org/research/v2v.htm

Operations & Maintenance Summary

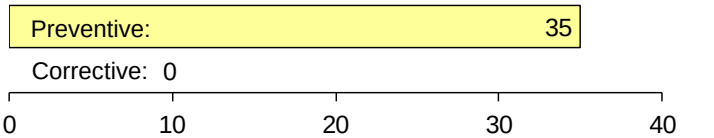
Events Responded to by the Control Room Last Week:



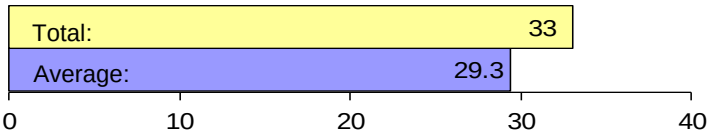
Drivers Assisted by Safety Service Patrollers Last Week:



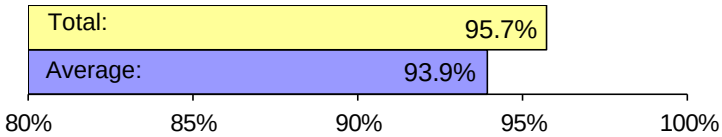
Field Equipment Corrective and Preventive Work Orders Completed Last Week:



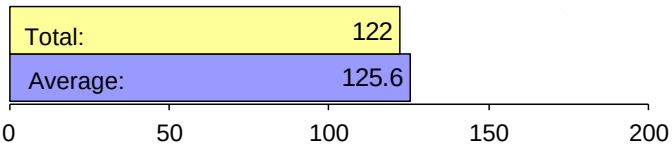
I.T. Work Orders Completed Last Week:



SSP Truck Availability Last Week:



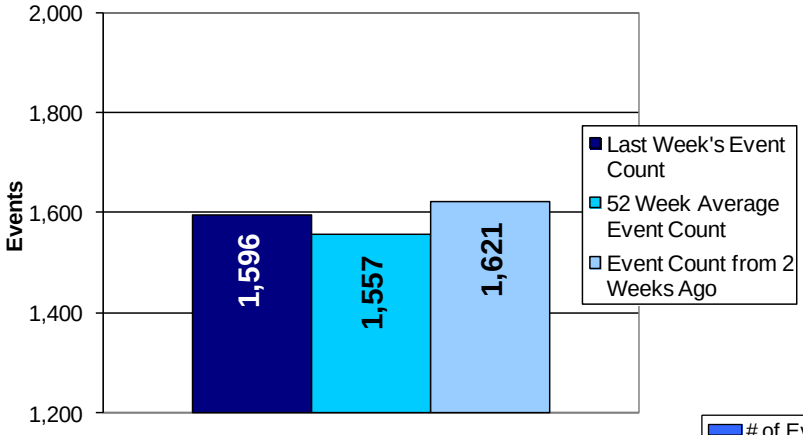
Number of Gallons Dispensed During SSP Fuel Assists Last Week:



Data Key is located on pages 8-12

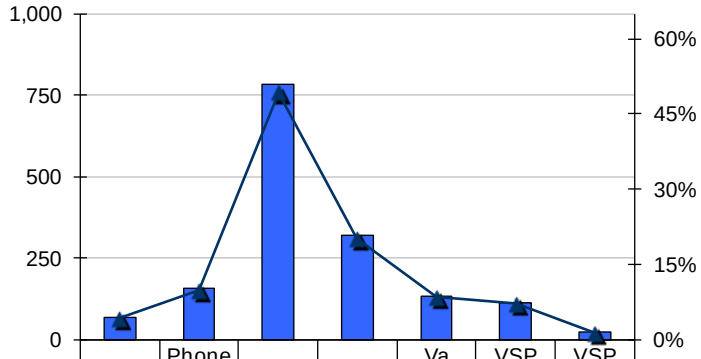
Control Room

Number of Events Logged by the Control Room



Events by Detection Source

Count and percentage of total events that week



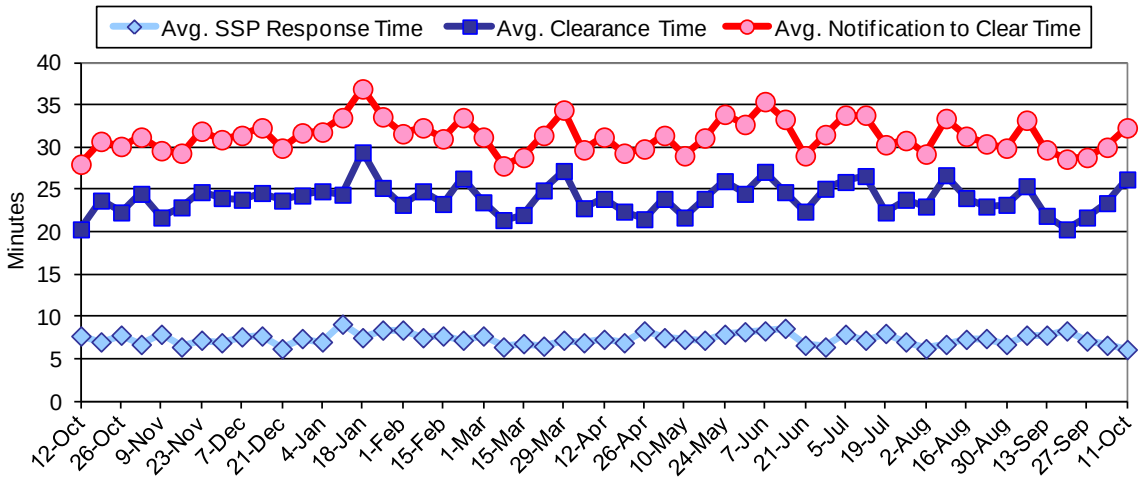
	Other	Phone Call	SSP	CCTV	Va Traffic	VSP CAD	VSP Radio
# of Events Detected	66	155	785	321	134	114	21
% of Total Events	4.1%	9.7%	49.2%	20.1%	8.4%	7.1%	1.3%

Incident Duration

Notification < SSP Response

SSP Response < Incident Clear Time

Incident Clear Time < Notification *to* Clear Time



52 Week Average

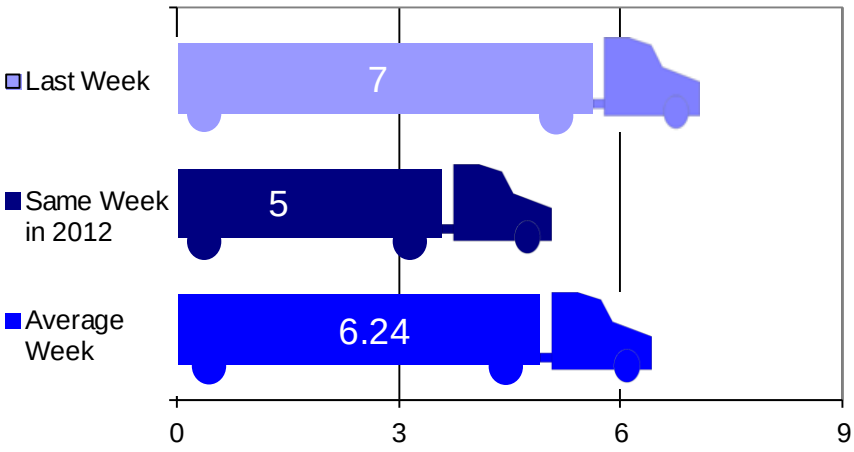
Total: 31.3 min

Clear Time: 23.9 min

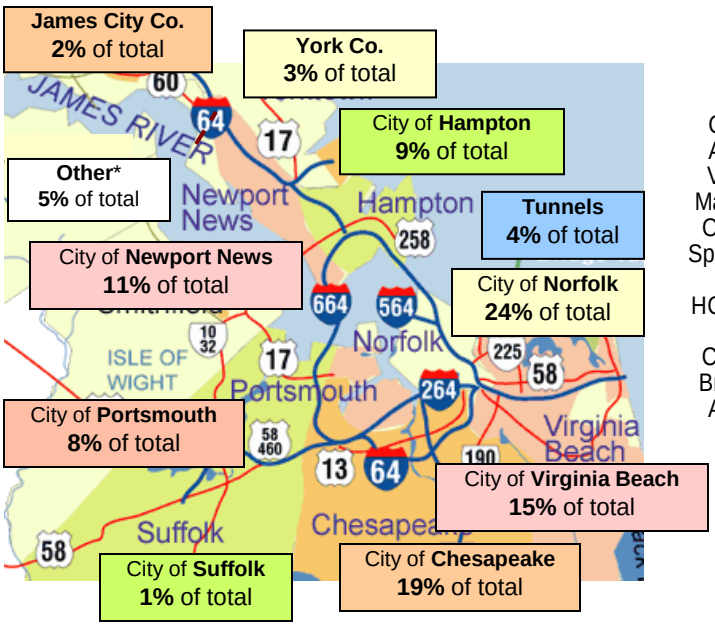
Response Time: 7.4 min

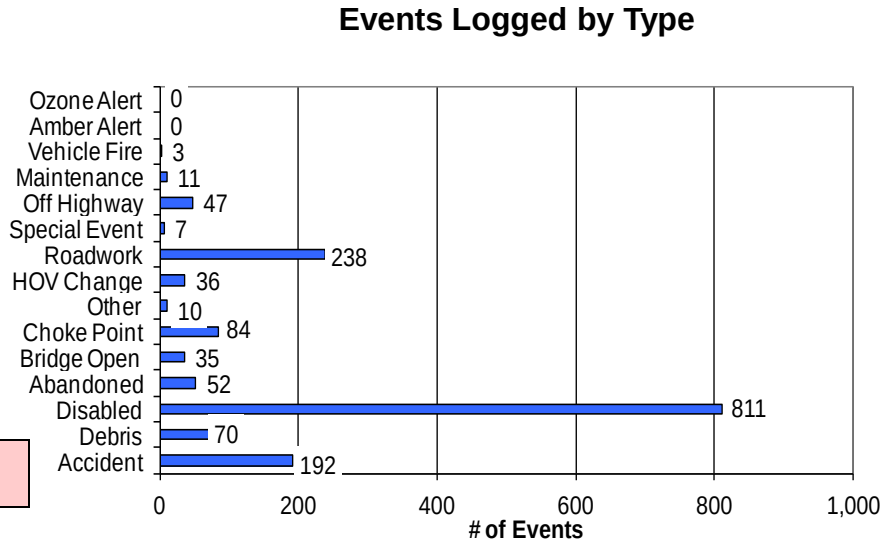
Note: Definitions for 'Incident' and 'Event' are located on page 11 of the Data Key

Number of Incidents Involving Tractor Trailers



Control Room (continued)



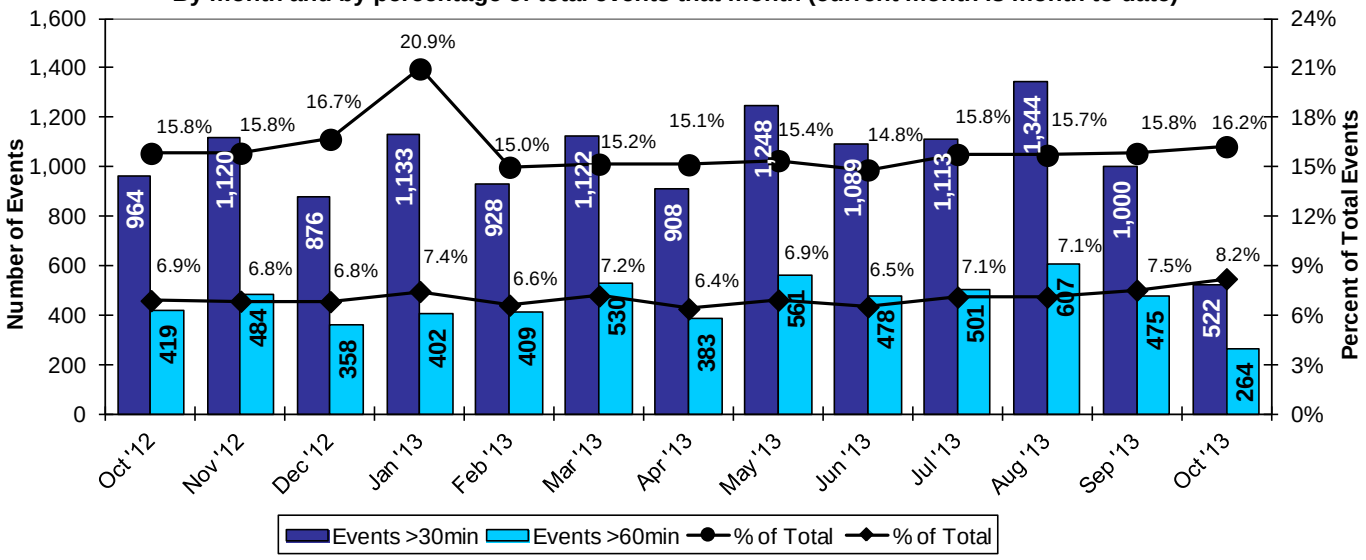


	Norfolk	Chesa-peake	Virginia Beach	Newport News	Hampton	Ports-mouth	Suffolk	York Co.	James City Co.	Tunnels	Other*
11-Oct	384	307	246	168	141	122	18	53	26	59	72
4-Oct	431	288	208	135	159	150	29	50	28	88	55
27-Sep	399	276	187	165	139	120	27	75	18	66	59
20-Sep	352	270	223	126	166	124	17	64	22	76	59
13-Sep	431	296	277	162	178	128	18	66	33	76	62
6-Sep	382	249	252	160	180	106	22	61	25	66	63
30-Aug	444	365	247	150	181	128	15	60	35	71	71
23-Aug	419	291	239	174	170	86	28	86	30	82	61

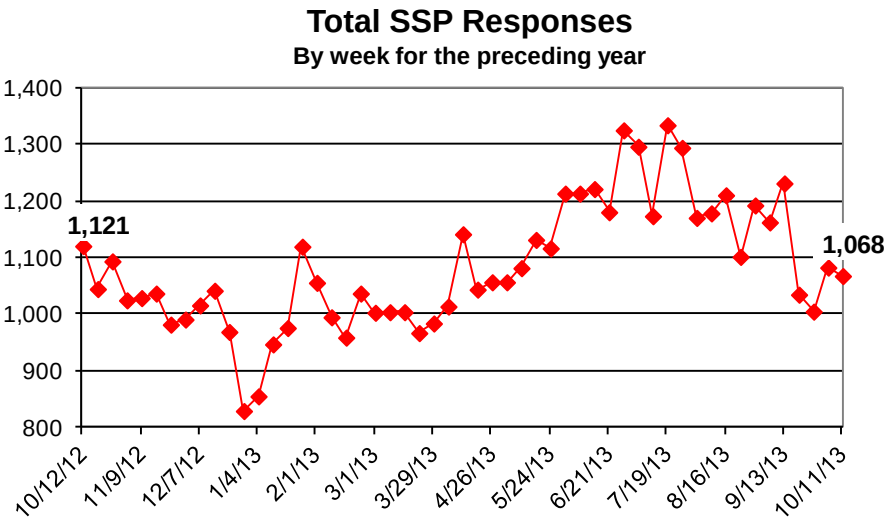
* Other includes Accomack, Northampton, Williamsburg, Poquoson, Surry, Isle of Wight, Franklin, Southampton, Sussex, Emporia, Greensville

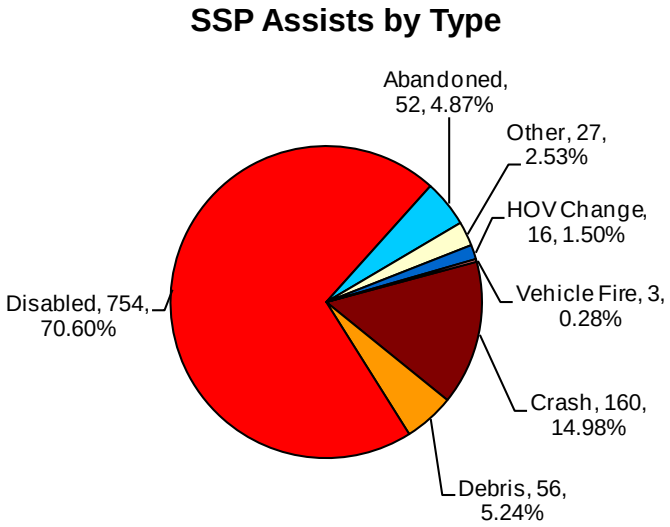
Events Greater Than 30 and 60 Minutes

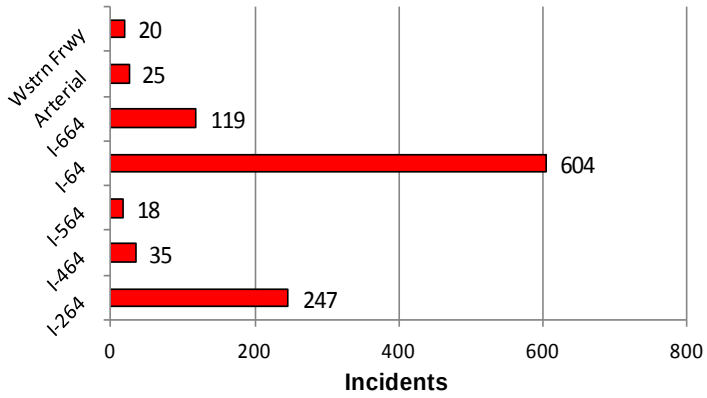
By month and by percentage of total events that month (current month is month to date)

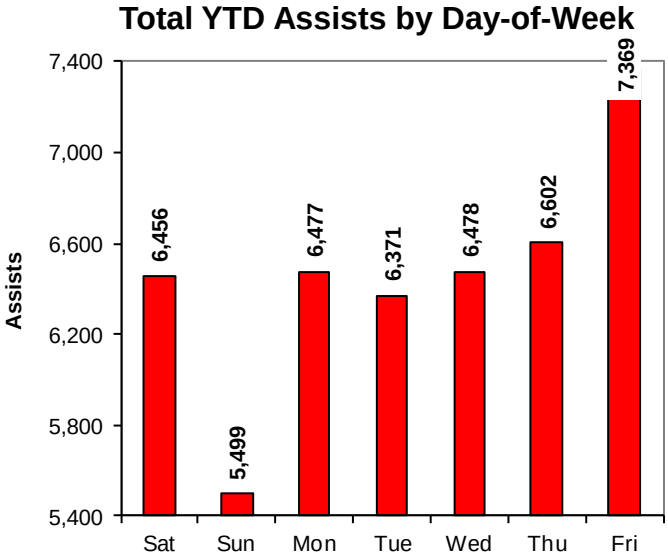


Safety Service Patrol

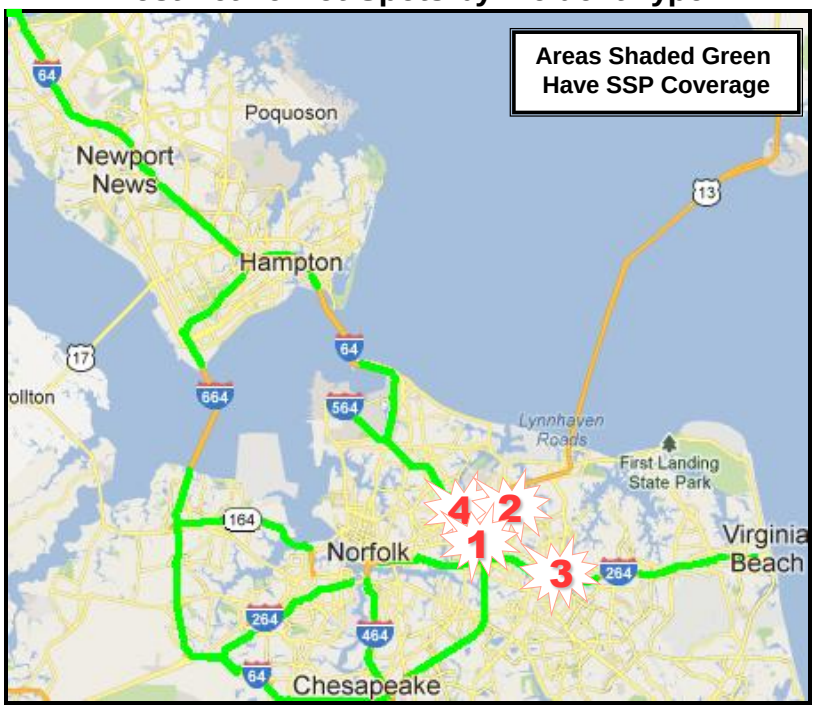








Most Active Hot-Spots by Incident Type



	Most Active	Interstate	Segment ID	# of Incidents	% of Incident Type
1	Abandoned Vehicles	I-64	64-11	4	7.7%
2	Crashes	I-64	64-11	11	5.7%
3	Debris Removed	I-264	264-20	7	10.0%
4	Disabled Vehicles	I-64	64-11	42	5.2%

Segment ID: Descriptions	
64-11	64 / 264 Interchange - Northampton Blvd
64-11	64 / 264 Interchange - Northampton Blvd
264-20	Independence Blvd - Rosemont Rd
64-11	64 / 264 Interchange - Northampton Blvd

Data Key is located on pages 8-12

Maintenance

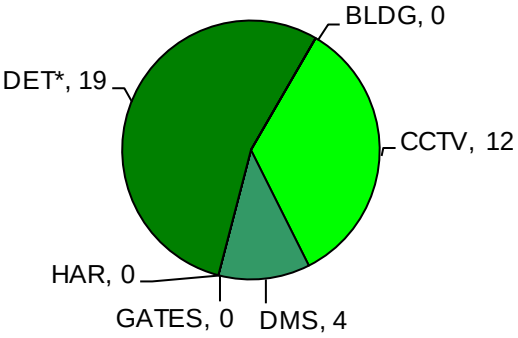
Current Field Device Operational Availability

Component	Total	Average Not Working	Average Working	Average System Availability
CCTV	276	0.0	276.0	100.0%
DMS*	193	0.3	192.7	99.8%
GATES	5	0.0	5.0	100.0%
HAR	7	0.0	7.0	100.0%
Detectors	166	6.0	160.0	96.4%

**Detectors are being added to the total count as they are completed in the Detector Replacement Project.

*DMS that are unavailable due to the ongoing DMS Retrofit Project have been temporarily removed from the total count (197). There are currently 4 signs unavailable due to the retrofit project.

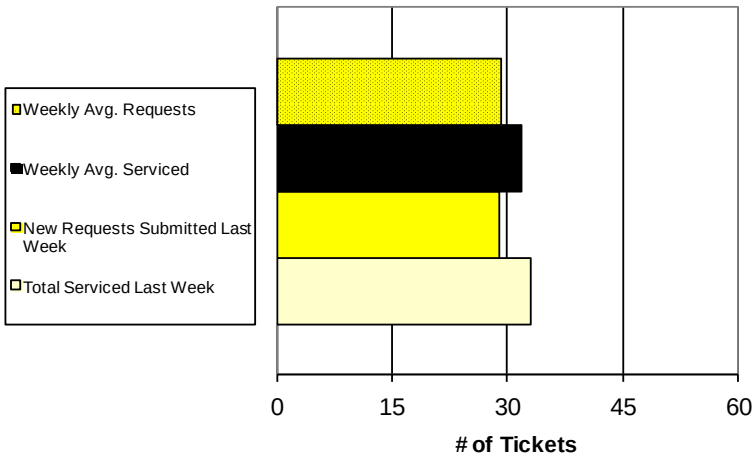
Number of Preventive Tasks Completed by Equipment Type



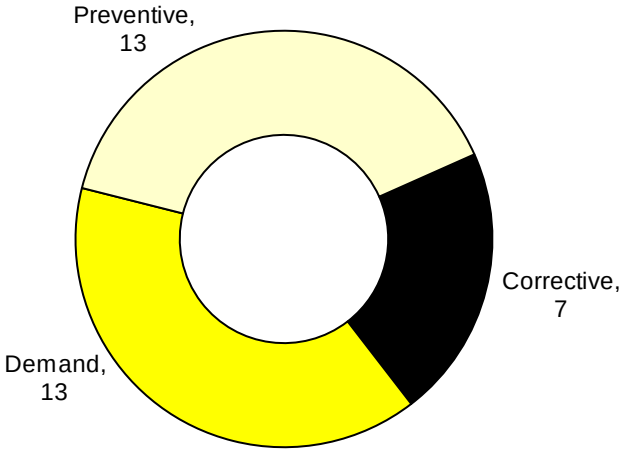
	56 Week Average
CCTV	10.7
DMS	7.5
GATES	0.4
HAR	1.3
DET	16.0
BLDG	3.8

*PMs for the category of "DET" are for Detector Cabinets, not Detector Stations

Work Orders Submitted to/Serviced by I.T.

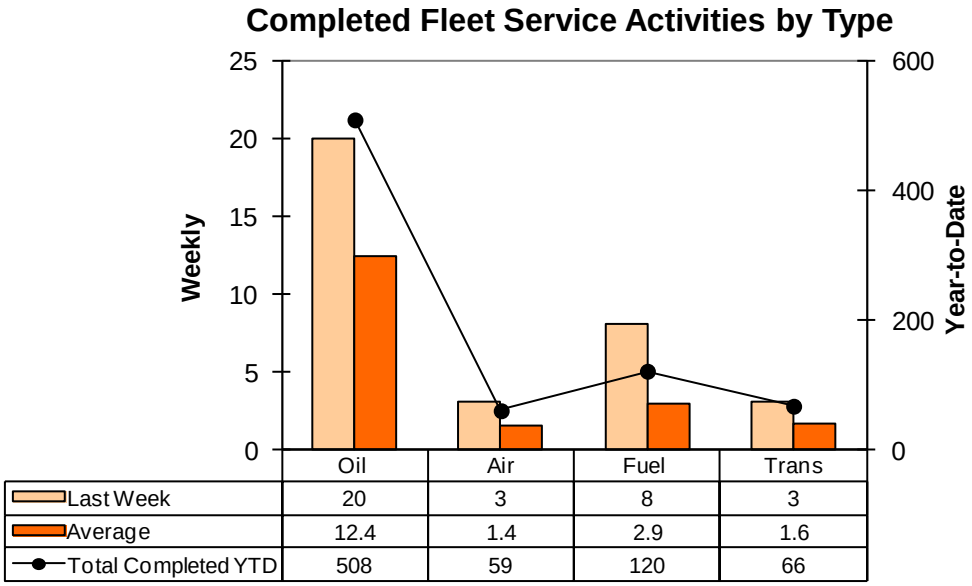


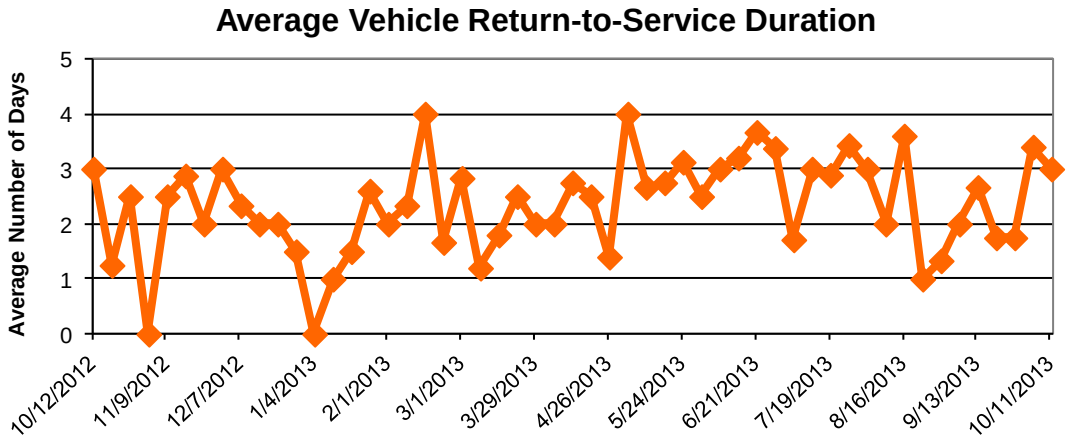
I.T. Facility Maintenance Activity



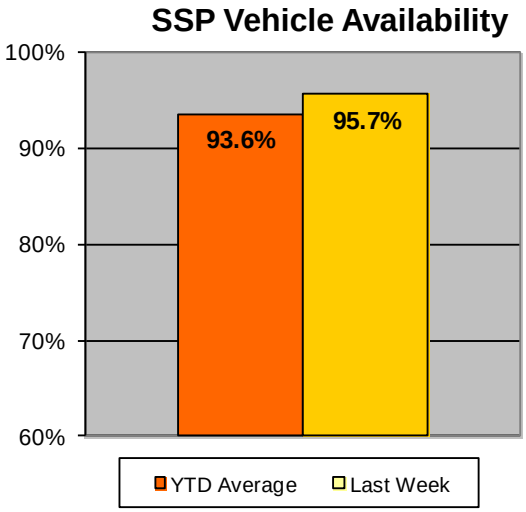
Data Key is located on pages 8-12

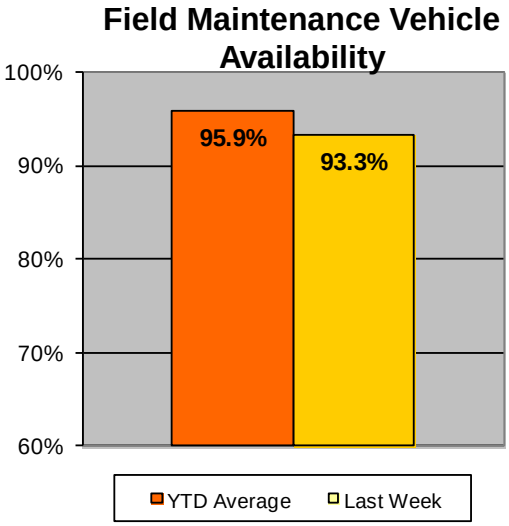
Fleet Management

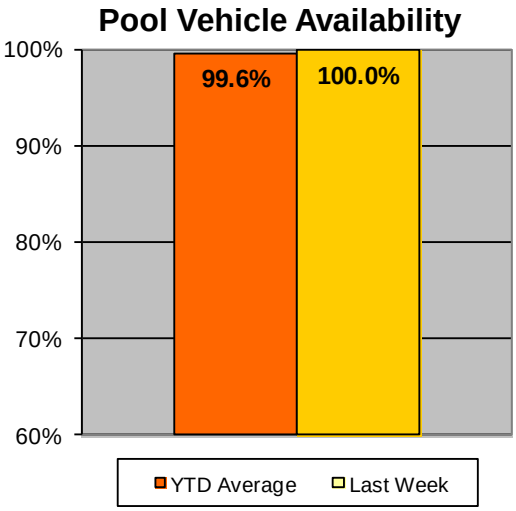




A value of 0 denotes that no vehicles were returned from the shop for that week



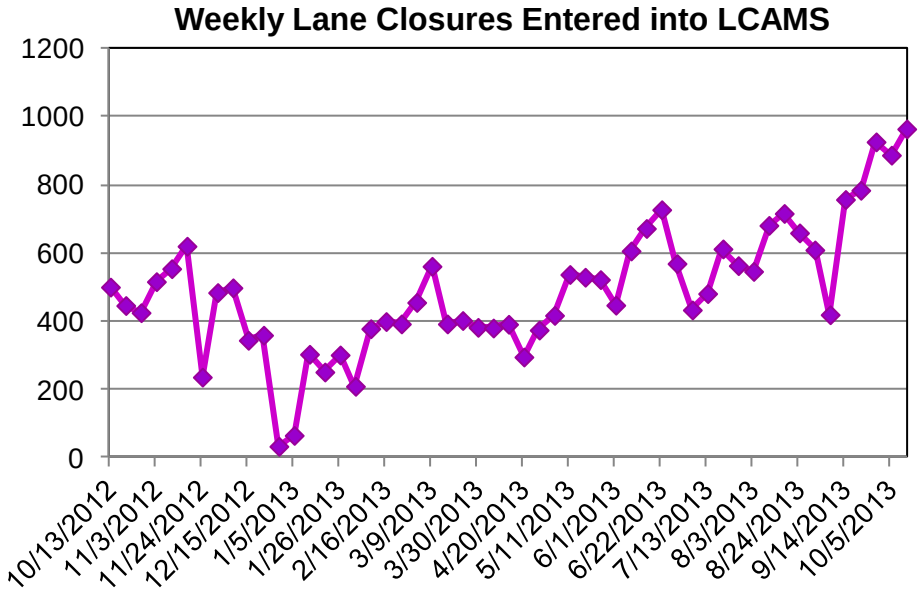


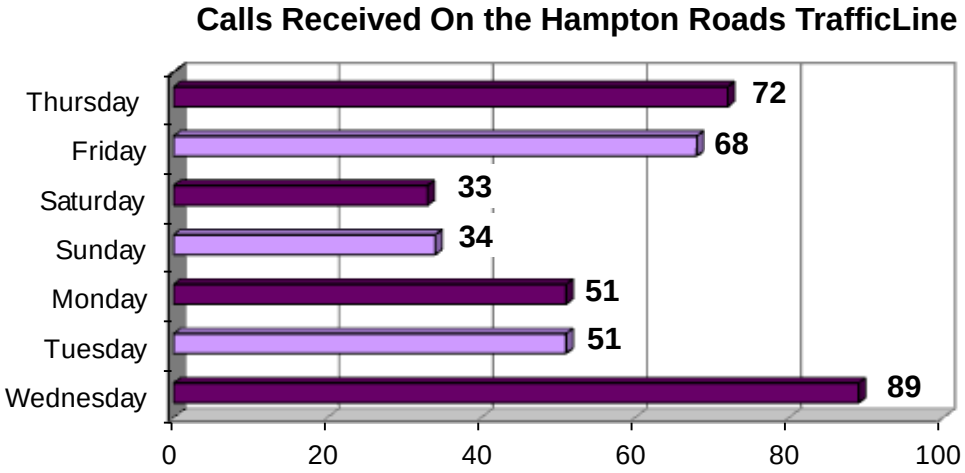


Data Key is located on pages 8-12

Public Information & Media Relations

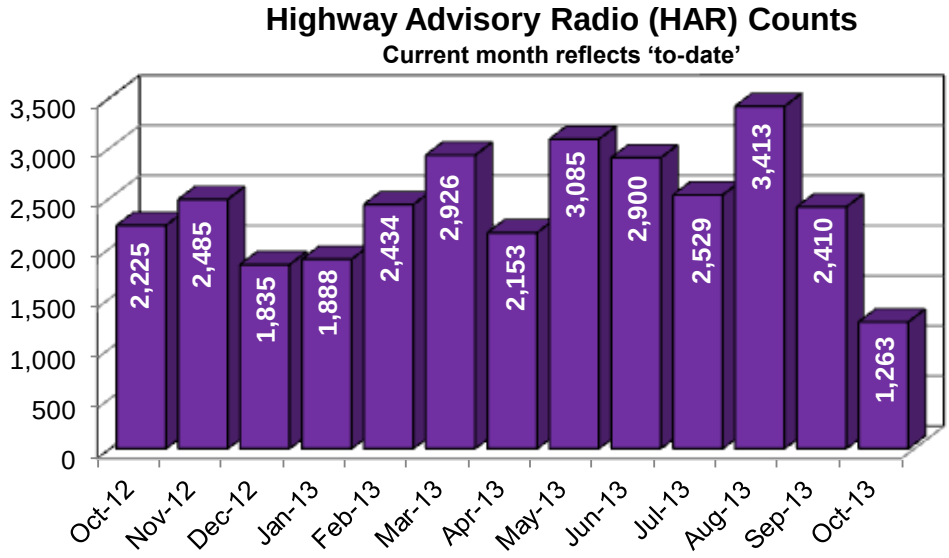
Visit
http://vdot.openlcams.com
to view current and scheduled lane closures throughout the state.





398 calls from motorists were received on the TrafficLine between Thursday 10/3 and Wednesday 10/9.

There were 662 events associated with HAR messages last week.



Data Key is located on pages 8-12

Data Key

Cover Page

Events Responded to by the Control Room Last Week
Description: Shows the actual past week and the weekly average event count for the rolling year.
Purpose: Provides a snapshot of how many events were responded to the previous Saturday through Friday. Weeks tallying many events will correlate with an increase in VaTraffic/511 traveler information calls.

Drivers Assisted by Safety Service Patrollers Last Week
Description: Shows the actual past week and the weekly average number of SSP assists for the rolling year.
Purpose: Gives a snapshot view of the quantity of SSP assists. These assists reflect direct HRTOC customer contact, an important part of the HRTOC mission.

Field Equipment Corrective and Preventive Work Orders Completed Last Week
Description: The values shown reflect the total number of responses to field equipment corrective maintenance repairs and the total number of preventive maintenance tasks completed during the seven day period.
Purpose: Provides a summary view comparing the amount of corrective maintenance being completed in
relation to preventive maintenance. A 2:1 ratio (corrective : preventive) of man hours is considered successful.

I.T. Work Orders Completed Last Week
Description: These values provide a summary view of I.T. work orders closed during the past week's reporting period and the average number of work orders closed each week for the last year.
Purpose: Summarizes the level of I.T. effort from the previous week in comparison to the average for the last year.

SSP Truck Availability Last Week
Description: The percentage of the SSP vehicle fleet that was available for use last week (versus being out of service for maintenance), and a weekly average of that availability for the rolling year.
Purpose: The values of these numbers are indicators of vehicle repair activity and are used in support of scheduling and planning activities.

Number of Gallons Dispensed During SSP Fuel Assists Last Week
Description: Displays the weekly number of gallons of fuel dispensed by the SSPs. Also included is the year-to-date average per week. This number is an estimated one gallon of gas per SSP fuel assist.
Purpose: Reflects the most tangible type of assistance provided by the SSPs. Unlike other SSP assistance types (e.g. changing a tire), fuel can be counted as a direct unit cost. Therefore, with gas prices the way they are, this particular type of assistance has a profound effect on the cost of operations.

Data Key (continued)

Operations

Number of Events Logged by the Control Room

Description: This bar graph shows the number of events logged in the incident database for the prior week, for two weeks ago, and the weekly average for the past year.

** ***Incidents*** *are defined as unplanned situations adversely impacting traffic flow such as accidents, debris, disabled vehicles, and abandoned vehicles.*

** ***Events*** *are defined as 'special events' not affecting traffic, as well as the above defined 'Incidents'.*

Purpose: Shows how the current value compares to the value two-weeks ago and an annual weekly average value. For comparison and analysis purposes, it reveals the past week's numbers relative to "normal" levels and aids in forecasting activity levels based on seasonality, weather, holidays and/or other events.

Events by Detection Source

Description: The bar graph provides a tally of last week's events, broken down by their detection source (VSP Radio and VSP CAD [Virginia State Police radio or computer aided dispatch], VaTraffic, CCTV, SSP, Phone Call and Other [i.e. field contractor or fire department]).

Purpose: Identifies the sources of most our incident discoveries and those sources that need to contribute greater to detection.

Incident Duration

Description: This graph shows the average duration in minutes from incident detection by a source (CCTV, Phone Call, VaTraffic, VSP CAD, VSP Radio, and Other) to when an SSP truck arrives on scene; the time from SSP arrival until the incident (Abandoned, Accident, Debris, Disabled) is completely cleared; and the total amount of time from initial detection to complete clearance.

Note: Only includes incidents responded to by a SSP where the Response & Clear Times were recorded in the Incident Database.

Purpose: This information is used for extemporaneous audits. Allows management to review incident durations in relationship to pre-determined goals and provide a benchmark for incident response.

Number of Incidents Involving Tractor-Trailers

Description: This bar graph shows the number of incidents involving tractor-trailers last week, for the same week last year, and the average for all weeks in the past year.

Purpose: Incidents involving tractor-trailers can take considerably longer to clear and thus have the capability to cause a negative effect on traffic flow and lane clearance. A high number of tractor-trailer incidents can have a negative effect on the number of incidents cleared within the 30 and 60 minute benchmark.

Weekly Total Events by Geographic Location

Description: This table and accompanying map shows the number of events logged per locale by the Control Room. Rarely, certain events are not included in this tally because they are not defined by municipality.

Purpose: This will aid in determining areas of high demand for SSP services and help to adjust scheduling and routes accordingly.

Data Key (continued)

Operations (continued)

Events Logged by Type

Description: This graph enumerates event counts for the past week, and shows the value for each type:

Amber and Ozone Alert (i.e. the HRTOC displayed a message on the DMS alerting the public of the current situation), Vehicle Fire, Maintenance Action, Off Highway, Special Event (i.e. concert or college graduation), Roadwork, HOV Change (manual change made to the HOV system from the control center), Other (i.e. police or medical emergency), Choke Point and Bridge Open (HRTOC involved in managing congestion at area bridges and tunnels due to heavy traffic or a bridge opening), Abandoned (abandoned vehicle), Disabled (disabled vehicle), Debris (i.e. ladder, mattress or road kill disrupting the flow of traffic), and Accident.

Purpose: This chart is used to quantify which categories of incidents most severely impact the roadways. Over time and by season comparisons are possible by examination of previous reports.

Events Greater Than 30 and 60 Minutes

Description: This graph totals those events which lasted more than thirty minutes and those events which lasted more than sixty minutes in duration. Percentages of total events are included. Purpose: This information is used to compare the activity levels of 'serious events' that take longer than the average clearance time. Results can spotlight contributing factors such as short staffing, inter-agency communication, and patrol route inefficiencies.

Total SSP Responses

Description: The line graph displays SSP assist counts by week for the past year.

Purpose: The graph can be used to estimate the number of SSP responses in future weeks. The information can be used to plan future route expansion and staffing levels.

SSP Assists by Type

Description: This pie chart shows the relative values for the major types of SSP assists last week. Types include Disabled (disabled vehicle), Debris (i.e. ladders or dead animals in roadway), Accident, Vehicle Fire, HOV Change (i.e. an SSP was involved in an HOV Change), Abandoned (abandoned vehicle), and Other (i.e. traffic control for police activity, medical emergencies).

Purpose: Provides information used for forecasting SSP vehicle equipment, tool, and consumable material (flares, batteries) needs short term and long term, and, to an extent, future staffing requirements.

Number of SSP Responses by Roadway

Description: This graph shows the number of SSP assists over the past week, displayed for each freeway that the HRTOC oversees. Also included are responses on arterial roads, bridges, and tunnels.

Purpose: Used to substantiate the number of SSP responses by freeway assignment. This information can be used to plan future patrol area expansion and definition, as well as staffing levels by roadway.

Data Key (continued)

Operations (continued)

Total YTD (Year-to-Date) Assists by Day-of-Week

Description: This chart depicts the number of SSP assists rendered for each day of week, for the current year-to-date.

Purpose: Helps in planning daily staffing levels based on year-to-date activity levels by day.

Most Active Hot-Spots

Description: This table shows, for four incident categories (Abandoned Vehicles, Accidents, Debris Removed, and Disabled Vehicles), the Segment ID and Interstate of the most active section of roadway, last week's incident count for that section, and the percentage of the total incident type that count represents.

Purpose: Review of these values permit management to detect emerging patterns and plan SSP staffing and routes in relation to those areas requiring the most attention.

Maintenance

Current Field Device Operational Availability

Description: This table shows the total number of units of each equipment type (CCTV, DMS, Gates, HAR, and DET [detector stations]), how many are working and how many are not. The number of working units expressed as a percentage of the total units is also included.
Note: A DMS asset is considered not working if it is illegible
Purpose: This information provides maintenance a clear view of the percentage of working equipment, provides operations a notion of system "eyes and ears" limitations, and provides management information as to current levels of equipment unit functionality.

Number of Preventive Tasks Completed by Equipment Type

Description: This chart and the accompanying table show the preventive maintenance tasks completed during the past week, and weekly averages for the last year. In addition to the five main equipment categories, buildings are included.

Purpose: Helps management allocate PM resources (equipment) and keep to schedule.

Work Orders Submitted to / Serviced by I.T.

Description: This bar graph shows the number of new work order requests submitted to the I.T. Department last week, and the number that were serviced (worked on, but may not have been completed). Weekly averages for the past year are also graphed.

Purpose: The metric helps track I.T. Department workloads, in support of I.T. staff/resource allocation and scheduling.

I.T. Facility Maintenance Activity

Description: This donut graph shows I.T. Department tasks completed during the past week for work types: Corrective - "My printer is not working, please fix it"; Demand – "I need a new printer"; Preventive – regular PM on a schedule; Routine – a replacement printer every three years.

Purpose: The breakout supports management in the allocation of staff, equipment, and budget resources at HRTOC.

Data Key (continued)

Maintenance (Continued)

Completed Fleet Service Activities by Type
Description: This chart shows weekly, average, and year-to-date counts for vehicle maintenance services. Oil (oil change), Air (air filter), Fuel (fuel filter), and Trans (transmission fluid services) are represented here.
Purpose: Helps to account for labor and dollars expended for vehicle service and to plan for future contract and material expenditures.

Average Vehicle Return-to-Service Duration
Description: These numbers are an average time value representing a "return-to-service" duration in days; the elapsed time from arrival at the vehicle repair location until the vehicle returns to service. Values for SSP, Field Maintenance, and Pool Vehicles are included in the average.
Purpose: These values also measure the performance of the repair effort and are used in scheduling SSP vehicle service and Patroller/Maintenance Staff resources.

HRTOC Vehicle Availability
Description: The three bar graphs show what percentage of the total SSP, Field Maintenance, and Pool fleets were available last week, and also provide a year-to-date (YTD) average for comparison.
Purpose: These numbers measure fleet service effort and success rates.

Public Information

Weekly Lane Closures Entered into LCAMS

Description: The HRTOC began using LCAMS (Lane Closure Advisory and Management System) on May 1st 2011. LCAMS is a program that allows users in Hampton Roads to quickly add and modify planned lane closures or determine if a lane closure conflicts with any existing entries.

Purpose: This information shows the efforts associated with managing lane closures throughout Hampton Roads. The Lane Closure Technician, Public Information Officer and Control Room operators are all impacted by increasing lane closure counts.

Calls Received On the Hampton Roads TrafficLine (361-3016)
Description: The Hampton Roads TrafficLine was implemented in December of 2006 in order to assist motorists with their travel information needs. Motorists can dial a number and hear traffic conditions relating to the Highway Advisory Radio reports. This bar graph shows number of calls received by day of the week. Due to the way TrafficLine data is updated, the previous week's data is only available through Wednesday.
Purpose: This information will help public affairs become aware of what days of the week are of interest to Hampton Roads commuters as well as ensure additional dissemination of timely traffic information to the public.

HAR Counts
Description: Highway Advisory Radio (HAR) messages are created and updated several times during the day. This graph tallies the number of events that have a HAR message associated month-to-date, and includes the values for previous months for comparison.
Purpose: The graph shows how the current value compares to past months; the count mirrors event activity on HRTOC monitored roadways. The count is also an indicator for the effort expended in keeping the HAR message up-to-date, in order to maximize the public's usability of the HAR resource.